OBSTETRICAL ANAL SPHINCTER INJURIES (OASIS):

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Objective

• To review the evidence relating to obstetrical anal sphincter injuries (OASIS) with respect to diagnosis
• Repair techniques and outcomes
• To formulate recommendations as to patient counselling regarding route of delivery for subsequent pregnancy after OASIS.
Fourth degree Injury

Complex (EAS and IAS) and anal epithelium
How can the identification of obstetric anal sphincter injuries be improved?

• All women having a vaginal delivery are at risk of sustaining OASIS or isolated rectal buttonhole tears.

• They should therefore be examined systematically, including a digital rectal examination, to assess the severity of damage, particularly prior to suturing.
Isolated rectal buttonhole tears
Repair of OASIS

- The aim of reconstructive surgery:
  - Restore the continuity of both the external and internal anal sphincters.
  - In addition, a thick perineal body and rectovaginal septum should be created to provide muscular and structural support in the thin area between the anterior anorectum and vagina.
Repair of OASIS

• General principles
  - Repair of third- and fourth-degree tears should be conducted by an appropriately trained clinician or by a trainee under supervision.
  - The surgeon should also make sure that the uterus is properly contracted following the delivery of the placenta.
Repair of OASIS (cont)

- Repair:
  - In an operating theatre
  - Under regional or general anaesthesia,
  - With good lighting and
  - With appropriate instruments.
Repair of OASIS (cont)

- The key initial task:
  - To assess both the extent of bleeding and injury to the perineum, vagina, and anorectum.
  - This assessment should include both visual inspection and palpation.
Repair of OASIS (cont)

- If feces are obviously present:
  - The tissues irrigated thoroughly.
  - A gentle scrub with chlorhexidine.
Repair of OASIS (cont)

• The apex of the vaginal laceration should always be identified.

• After inspecting the vagina, a rectal examination is performed to exclude injury to the anorectal mucosa and anal sphincter.

• The rectovaginal examination is accomplished by placing an index finger in the rectum and the thumb over the anal sphincter and using a pill-rolling motion to assess the sphincter.
Repair of the torn anorectal mucosa

- Should be repaired with 3-0 polyglactin sutures using either the nonlocking continuous or interrupted technique.
Internal anal sphincter (IAS) Repair

It often retracts laterally and superiorly and appears as thickened, pale pink, shiny tissue just above the anal mucosa that some clinicians refer to as perirectal fascia.

• *It is advisable to repair this separately with continuous, interrupted or mattress sutures without any attempt to overlap the IAS.* (3-0 polyglactin or 3-0 PDS)
External anal sphincter (EAS) Repair

• The repair begins by identifying and grasping the two severed ends of the dark red external anal sphincter muscle with Allis clamps

• It may be necessary to push the Allis clamp deep into the surrounding connective tissue to locate the sphincter since one or both ends typically retract when it ruptures
External anal sphincter (EAS) Repair

1-An overlapping

2-An end-to-end (approximation) method
   • For partial thickness (all 3a and some 3b) tears, an end-to-end technique should be used (2-0 polyglactin or 2-0 PDS)
   • The anus should easily admit one finger following the procedure
Post operative care

1- Foley catheter

2- Applies ice packs to the perineum for 24 hours
- Warm water soaks to start thereafter
- Sitz baths: five minutes in duration, for a frequency of four times daily, or after any bowel movement (particularly emphasized in women who have had anal sphincter lacerations).

3- The squirt bottle is used to irrigate the perineum with warm water during urination
Post operative care (cont)

4-The use of broad-spectrum antibiotics is recommended following repair of OASIS to reduce the risk of postoperative infections and wound dehiscence. (cefotetan or cefoxitin; clindamycin if beta lactam allergy)
Post operative care (cont)

5- Educate regarding fluid intake (at least 48 to 64 oz of fluid a day, mostly water; this volume is increased as needed for lactating women)

6- Oral laxative: Milk of magnesia 30cc/BID or lactulose 10cc/TDS (7-10 days).

7- High fiber or low residue: First month postoperative (high-fiber diet with at least 30 grams of fiber per day).
Post operative care (cont)

8- Pain management:
- Ice packs (10 to 20 minutes) reported decreased pain at 24 to 72 hours
- Oral ibuprofen 600 mg every six hours
Acetaminophen is our second-line agent: 650 mg every 6 hours
- Topical anesthetics: skin moisturizers (aloe and lanolin) and menthol, which creates a cooling sensation
How should women with OASIS be managed postoperatively?

- Review by obstetrician after 6 – 12w:
  - Symptoms of pelvic floor dysfunction such as incontinence and prolapse (repair technique)?
  - Anal pressure measurements
  - Ultrasound imaging
Physical therapy & pelvic floor muscle training

- Pelvic floor physical therapy is typically begun six to eight weeks from repair (after healing EAS): - Improvement in anal incontinence
What is the prognosis following surgical repair?

- Women should be advised that 60–80% of women are asymptomatic 12 months following delivery and EAS repair.
Future deliveries

- All women who sustained OASIS in a previous pregnancy should be counselled about the mode of delivery and this should be clearly documented in the notes.

- The role of prophylactic episiotomy in subsequent pregnancies is not known and therefore an episiotomy should only be performed if clinically indicated.
Future deliveries (cont)

- The risk of recurrence of an obstetrical anal sphincter injury at a subsequent delivery is 3% to 5%. (II-2)
- It was calculated that 2.3 Caesarean sections at the cost of increased maternal risk would be required to prevent one case of anal incontinence in a woman with prior obstetrical anal sphincter injury. (II-2)
Candidates for vaginal delivery

• As a general rule, OASIS women who are asymptomatic with satisfactory anal pressure measurements and ultrasound imaging should be counseled that they have a 95% chance of not sustaining recurrent anal sphincter injury or developing new symptoms following a subsequent vaginal delivery.
Candidates for cesarean section

- Women with mild fecal symptoms or abnormal endoanal ultrasonography and/or manometry should be advised prelabor cesarean section.
- Asymptomatic women with two or more prior OASIS(10-fold)
Figure 4  Flow diagram for the management of obstetric anal sphincter injury in subsequent pregnancies